UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/789,923 | 02/27/2004 | Josef Chalupper | P04,0042 | 8887 |

26574 7590 04/17/2007

SCHIFF HARDIN, LLP
PATENT DEPARTMENT
6600 SEARS TOWER
CHICAGO, IL 60606-6473

| EXAMINER | |
|---|---|
| ENSEY, BRIAN | |
| ART UNIT | PAPER NUMBER |
| 2615 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|---|---|---|
| 3 MONTHS | 04/17/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/789,923 | CHALUPPER, JOSEF | |
| | Examiner | Art Unit | |
| | Brian Ensey | 2615 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *05 February 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-3, 5-10 and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Mangold et al. U.S. Patent No. 4,972,487.

Regarding claim 1, Mangold teaches a method to adjust a hearing device (2), comprising: manually inputting a manually-entered desired setting value (i.e. gain, see col. 3, lines 16-19) in the hearing device by a hearing device user via a user-operable input mechanism (18) at a determinable point in time in a first environment situation; measuring at least one sound quantity (recording/ datalogging environmental events) concerning the a first environment situation at the determinable point in time; automatically learning one or more learned setting values to be used, depending on the desired setting value and the at least one measured sound quantity in the first environment situation (storing events and settings in memory based on recorded events); associating and storing the learned setting values with the first environment situation (learned settings stored after measuring for 2 minute intervals); newly measuring at least one sound quantity concerning a second environment situation (constant measurement is performed during changing listening situations); and automatically adjusting the hearing device to previously stored learned setting values associated and stored with regard to the second environment situation (adjustment can be automatically made (APS) in response to a change in the environmental situation) (See col.1, lines 37-66 and col. 3, lines 2-66).

Regarding claims 2 and 9, Mangold further discloses at least one measured sound quantity represents a minimum or maximum sound pressure level in a frequency channel, or a modulation depth (See col. 3, lines 49-59).

Regarding claims 3 and 10, Mangold further discloses the setting value concerns an amplification or compression See col. 3, lines 16-21).

Regarding claims 5 and 12, Mangold further discloses the learning steps ensue according to at least one of: a) at predetermined points in time; and b) in a predetermined number (See col. 3, line 67 to col. 4, line 3).

Regarding claim 6, Mangold further discloses the learning steps ensue upon demand of a hearing aid user (See col. 4, lines 7-10).

Regarding claims 7, 13 and 14, Mangold discloses a wired or wireless adjustment device to adjust a hearing device comprising: a manually operated input device configured to input a manually-entered desired setting value in the hearing device by a hearing device user at a determinable point in time in a first environment situation (i.e. gain, see col. 3, lines 16-19); a measurement device configured to measure at least one sound quantity concerning the a first environment situation at the determinable point in time and at least one sound quantity concerning a second environment situation (recording/ datalogging environmental events using a microphone); and a computing device (programmable decoder 20 and memory 22) configured to automatically learn and store one or more learned setting values to be used (constant measurement is performed during changing listening situations), dependent on the manually-entered desired setting value and the at least one measured sound quantity, and to automatically output at an output of the computing device one or more previously learned wherein setting

values related to the second environment situation (adjustment can be automatically made (APS) in response to a change in the environmental situation) (See col.1, lines 37-66 and col. 3, lines 2-66).

Regarding claim 8, Mangold further discloses the input device comprises at least one of a volume controller, a remote control (6), and a speech input unit (See col. 3, lines 38-40).

### *Claim Rejections - 35 USC § 103*

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mangold in view of Levitt.

Regarding claims 4 and 11, Mangold does not expressly disclose the learning ensues via temporal weighting of learning steps. However, the use of temporal weighting of input signals is well known in the art and Levitt teaches learning ensues via temporal weighting of learning steps (The measured quantity is continuously monitored and the learning steps are weighted based on the frequency band and magnitude of the measured quantity and the level detector generates a two bit coefficient of the average signal level to set the frequency response of the programmable filter in accordance with the changing environmental situation, see Levitt col. 5, line 60 to col. 6, line 53 and col. 11, lines 16-31). Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the temporal weighting of Levitt in the recording of input of Mangold to more accurately take into account changes in

environmental conditions for automatic adjustment of the hearing aid (See Levitt col. 5, lines 60-63).

***Response to Arguments***

Applicant's arguments filed 2/5/07 have been fully considered but they are not persuasive.

With respect to the applicant's arguments on page 2, lines 11-13 that Mangold teaches manually or automatically changing programs or settings for the signal processing of a hearing aid, the Examiner respectfully agrees.

With respect to the applicant's arguments on page 2, lines 13 to page 3, line 3 that Mangold teaches the programs stored in Mangold is also limited, the Examiner agrees however, this is an inherent feature in all hearing aids that is dependent upon the size of the memory device used.

With respect to the applicant's arguments on page 3, lines 3-7 that Mangold teaches only a recording of setting changes and does not automatically learn the setting in dependence of an actual environmental situation, the Examiner disagrees. Mangold does teach logging the changes in the settings of the hearing aid device. Mangold also teaches an automatic program selector (APS) to step through programs in response to the current environmental situation and stop at a program where the environmental sound level has been amplified above a certain predetermined level (and manually adjustable) level.

With respect to the applicant's arguments on page 3, lines 8-20 that Mangold teaches only a history of settings and the actual environment situation is not measured and recorded, the

Examiner disagrees. Mangold teaches the level and spectrum of the sound measured at the microphone is used to determine specific values and parameters constituting a program and are then loaded via a coder and speaker to the prosthesis. The Examiner submits that this constitutes recording the environmental situation and provides a means to adjust the device automatically based on changing environmental situations.

With respect to the applicant's arguments on page 4, lines 5-23 that the combination of Mangold with Levitt regarding claims 4 and 11is not obvious since Mangold did not teach the elements of the independent claims, the Examiner regards these comments as moot in light of the discussion above regarding independent claims 1, 7, 13 and 14 as well as all dependent claims 2, 3, 5, 6, 8-10 and 12.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Ensey whose telephone number is 571-272-7496. The examiner can normally be reached on Monday - Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, Va. 22313-1450

**Or faxed to:**

(571) 273-8300, for formal communications intended for entry and for informal or draft communications, please label "PROPOSED" or "DRAFT".

Hand-delivered responses should be brought to:

Customer Service Window
Randolph Building
401 Dulany Street
Arlington, VA 22314

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BKE
April 11, 2007

SINH TRAN
SUPERVISORY PATENT EXAMINER